

Amendment under 37 C.F.R. § 1.111
Application No.: 09/437,246
Attorney Docket No.: Q56708

REMARKS

Claims 1, 5-7, 10-25, 27, 29-32, 34, 36-44, 46, 47, 50, 51 and 53, 54, 58-63 are all the claims pending in the application. By this Amendment, Applicant adds new claims 62-63. Specifically, claim 62 is supported on page 25, line 15 to page 26, line 17, page 40, lines 10 to 17 and see Figures 4a and 4b. Claim 63 is supported on page 25, lines 7 to 15 of the Specification.

Preliminary Remarks

Applicant respectfully thanks the Examiner for entering the Amendment filed on February 14, 2003.

Applicant also thanks the Examiner for allowing claims 1, 5-7, 10-25, 27, 29-32, 34, 36-44, 46, 47, 50, 53 and 58-61. The only claims rejected by the Examiner are claims 51 and 54-57.

Prior Art Rejections

The Examiner rejected claims 51 and 54-57, under 35 U.S.C. § 102(e) as being anticipated by USP 6,036,305 to Nagasaki et al. (hereinafter "Nagasaki"). Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider this rejection in view of the comments, which follow.

Claim 51

Claim 51, as now amended, recites:

an internal opening positioned right above
the ink supply...

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The Examiner asserts that claim 51 is directed to an ink cartridge and is anticipated by Nagasaki. Applicant respectfully disagrees with the Examiner. Applicant has carefully studied Nagasaki's discussion of the ink cartridge, which is not similar to an ink cartridge with an internal opening positioned directly above the ink port as set forth in claim 51.

Nagasaki teaches an ink cartridge with chambers 12 and 13, and a connection part 16 provided in the left of the chamber 13, which connects to the supply pipe 2 of the printing head 1. The connection part 16 is not limited to that position (col. 5, lines 56 to 57). In addition, a portion of the chamber 12 of the ink cartridge 11 protrudes into the chamber 13. The chamber 12 and the chamber 13 communicate with each other via a passage 63 communicating with a communicating hole 15. The passage 63 is constructed so as not to block the flow of the ink. An end of the passage 63 opens upward to the chamber 12, and the other end thereof opens upward to the chamber 13 via the communicating hole 15. The communicating hole 15 is provided with an air filter member 64 (Fig. 9; col. 9, lines 4 to 14). That is, the communication hole 15 forms a crank pass by which the ink cannot flow straight up.

However, Nagasaki teaches that the communication hole 15 is shifted rightward from the supply pipe 2 as shown in Figures 2 and 3. Alternatively, the communication hole 15 is shifted leftwards from the supply pipe 2, as clearly shown in Figure 9. Although the connection part 16 can be located at various locations, the communication hole 15 will never be directly above the supply pipe. There is simply no room for it at that location, e.g., see Fig. 9, the position of spring 17 and valve 18. In addition, the communication hole 15 holds a filter 64 to release the bubbles. If the communication hole 15 were to be positioned right above the supply pipe 2, air bubbles

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would intrude into the print head as they would approach the communication hole 15. As such, Nagasaki does not teach or suggest having the communication hole 15 being positioned directly above the supply pipe 2.

Therefore, *the internal opening positioned right above the ink supply port* as set forth in claim 1 is not suggested or taught by Nagasaki, which has the communication hole positioned to the right or to the left of the supply pipe 2. For at least these reasons, Applicant respectfully submits that independent claim 51 is patentably distinguishable from Nagasaki. Applicant therefore respectfully requests the Examiner to reconsider and withdraw this rejection of independent claim 51.

Claim 54

Next, Applicant respectfully traverses this rejection with respect to claim 54. Independent claim 54 recites: “wherein a distance from a part of said valve device which first contacts to the ink supply needle when the needle inserts into said ink supply port to a part of said packing member which engages with the ink supply needle is longer than a distance between a tip end of the ink supply needle and a part of the ink supply needle which first contacts to the packing member when the ink cartridge is coupled to the printing apparatus”.

The Examiner asserts that claim 54 is directed to an ink cartridge with two positions and is anticipated by Nagasaki (see page 3 of the Office Action). Applicant respectfully disagrees with the Examiner. Applicant has carefully studied Nagasaki’s discussion of the distance being

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created when the supply pipe contacts the valve and when the supply pipe engages the cartridge, which is not similar to the distance in these two positions as set forth in claim 1.

Nagasaki teaches the valve 18 pressed to deform by the end of the supply pipe 2, resulting in no gap being created between the valve 18 and the end of the supply pipe 2. Since the packing material 19 has a shape that corresponds to the shape of the end of the supply pipe 2, the air does not remain in the neighborhood of the valve 18 and the supply pipe 2 (col. 6, lines 55 to 62). In short, Nagasaki teaches the supply pipe closely abutting the valve without any gap with the packing material closely adhering to the valve and the supply pipe 2.

However, Nagasaki teaches all three elements: the supply pipe, the valve and the packing material closely adhering to each other. There is no gap (zero distance) between the supply pipe and the valve. In short, Nagasaki fails to teach or suggest a slight gap between the supply pipe and the valve, which is immediately followed by the sealing of the supply pipe with the packing material.

Therefore, *a distance* as set forth in claim 54 is not suggested or taught by Nagasaki, which lacks having a distance before the sealing is being performed. For at least these reasons, Applicant respectfully submits that independent claim 54 is patentably distinguishable from Nagasaki. Applicant therefore respectfully requests the Examiner to reconsider and withdraw this rejection of independent claim 54.

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New Claims

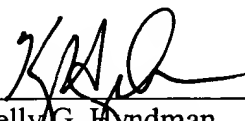
In order to provide more varied protection and to capture the allowable subject matter, new claims 62-63 are added. Claim 62 is clearly patentable over Nagasaki in view of its requirement of the same direction of the relative movement of said first member and said second member. In addition, claim 63 is allowable at least by virtue of its dependency on independent claim 5.

Conclusion and request for telephone interview.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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